Subject: [Fwd: Re: early projects for Seward Hwy Potter to Girdwood]
From: Jeff Ottesen <jeff_ottesen@dot.state.ak.us>
Date: Sat, 31 Dec 2005 11:00:11 -0900
To: Susan K Woodrow <susan_woodrow@dot.state.ak.us>

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-------- Original Message --------
Subject: Re: early projects for Seward Hwy Potter to Girdwood
Date: Wed, 21 Dec 2005 15:08:45 -0900
From: Scott Thomas <scott thomas@dot.state.ak.us>
Organization: State of Alaska, Department of Transportation
To: Jeff Ottesen <jeff ottesen@dot.state.ak.us>
CC: Ron F Martindale <ron martindale@dot.state.ak.us>, ROBERT CAMPBELL <rob campbell@dot.state.ak.us>, HENRY WILSON <hank wilson@dot.state.ak.us>
References: <43A9ABC0.1020008@dot.state.ak.us>

Oops, I meant to attach Ron's excellent graph showing how well the Seward Highway passing lane upgrades either side of the segment of concern reduced crash rates.

Jeff,

The big project in Preliminary Design has done a great job identifying needs and a wide range of alternatives for access, lanes.
Ron's analysis of projects we built shows that passing lanes will do the most to reduce crashes - up to 40% as compared to what we have on this stretch.
We don't believe there is anything else cheap and quick that we can build that will be this significant.

We do believe Trooper Enforcement is effective. For a lower cost and quick turnaround, can we talk with the Troopers about fund another DUI team based out of Soldotna?
AST did a great job of ticketing on Turnagain Hill and the flats after the several fatalities in Fall 2003. I don't think it will have a lasting effect without a routine presence. Once routine, Drivers tend to become a little more compliant, and would better respect the 55 zone and the 65 rural limit around the flats.
Currently there is only the Palmer DUI Team and Anchorage Police efforts at DUI enforcement. I called AST Soldotna for Capt. Bowman to discuss, but he was not available.

Attached is the U.K. article this month. Variable speed limits appear to work with results. Ron notes the same in Snoqualmie Pass Washington. However, a key feature is to plan and budget for a Traffic Ops Center and Automated or onsite enforcement to make sure it works.
It is high tech and requires reponsive and high maintenance. Staff and $$$. We can't just throw out some electronic signs and expect the best, we have to back it up with new state resources.

Scott

Jeff Ottesen wrote:

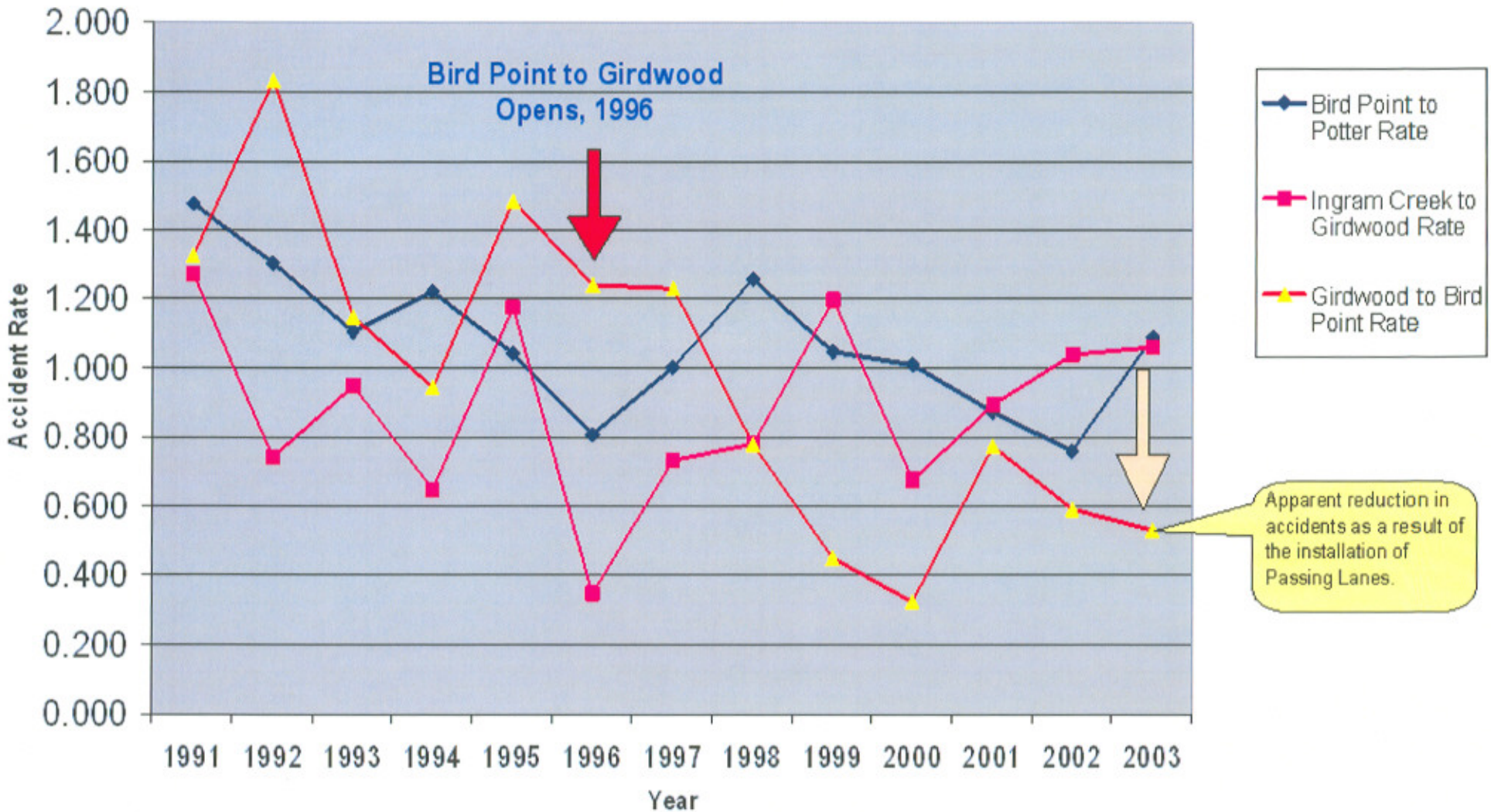
> Lot of political pressure on this segment, of course looking for the mega, long term fix (divided 4-lane). In the meantime is there any quicker projects that can be done such as variable speed limit signs, to help reduce speeds when things get icy.

Jeff Ottesen <jeff_ottesen@dot.state.ak.us>
Director
Alaska Dept. of Transportation
Division of Program Development

UKVariableSpeedLimits.pdf	**Content-Type:** application/pdf **Content-Encoding:** base64

Seward Highway Ingram to Potter Accident Rates 1991-2003.pdf	**Content-Type:** application/pdf **Content-Encoding:** base64

Seward Highway Accident Rates: Ingram Creek to Potter 1991-2003



U.K. Implements Mandatory Variable Speed Limits Along Second Motorway

Adjusting Speed Limits on First Motorway Has Resulted in Significant Decrease in Accidents

Drivers on a section of the M42, one of the most heavily congested stretches of highway in the U.K., will now have to adjust their driving habits to comply with mandatory variable speed limits during peak traffic conditions. Advisory adjusting speed limits have been in place since June 2005. The variable speed limits are part of the U.K. Highways Agency's £100 million Active Traffic Management (ATM) pilot on the M42. In 2007, the agency will also begin using the outside paved shoulder (there is no inside shoulder) to relieve congestion.

The 11-mile test section carries 125,000 vehicles every day and is a major link in the route from London and points south to northern U.K. destinations. Several other features also make the selected stretch of the M42 a prime candidate for implementing variable speed limits:

- There is a high level of traffic flow on both sides of the motorway.
- The section experiences higher than national average accident rates.
- A combination of local and longer distance traffic use the motorway.
- There are congestion points at some on- and off-ramps.
- Major regional events generate a significant amount of traffic.
- Significant traffic growth is projected for the area.

Variable speed limit signs on M42 in England. (Photo: Courtesy of the Highways Agency, U.K.)

A similar system has been in use on the M25 and has been shown to be effective in smoothing out traffic flows and reducing the risk of accidents in stop-and-go traffic. Research of variable speed limits on the M25 found a 6% decrease in stop-and-go traffic, a 10% decrease in injury accidents, and a 30% decrease in minor, damage-only incidents. In addition, emission levels have been reduced by 2–8%, depending on the type of emission measured.

Changes to the M42 to accommodate ATM began in 2003 and included new lighting, CCTV cameras feeding directly into traffic management centers, and emergency roadside telephones which have been in use since the end of 2004. The ATM pilot is expected to be fully operational by late 2006. In 2007, the final stage of using the outside shoulder as an additional lane, when warranted by traffic conditions, will be implemented.

The ATM system features the following:

- Digital enforcement technology to enforce the mandatory signals
- Advanced signs warning motorists of

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U.K. Implements Mandatory Variable Speed Limits

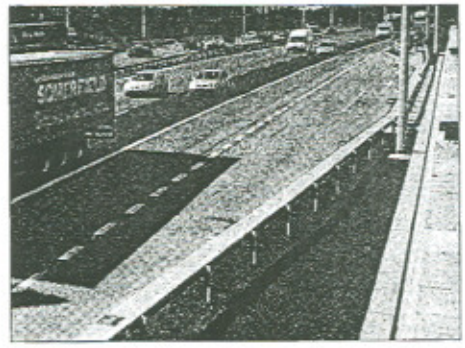
traffic conditions ahead.

- Entry/exit signs that inform drivers that they are entering or leaving an ATM area.
- The use of the outside shoulder as a traffic lane when necessary.
- Designated emergency pull-offs approximately every 1,500 feet for use in all cases of emergency or breakdown.
- Emergency roadside telephones located in emergency pull-off areas that are used to contact the control center in an emergency or breakdown and receive advice on how to exit an emergency refuge area safely.
- Four different types of cameras: pan, tilt, and zoom CCTV cameras, fixed CCTV cameras, automatic number plate recognition cameras, and digital enforcement cameras.
- Full motorway lighting to provide a safer driving environment at night and in bad weather and allow the control center to see the motorway using CCTV.

Road sensors located approximately every 300 feet in the road surface detect traffic flow characteristics. The computerized system uses this information to calculate the best speed to keep traffic flowing smoothly and indicates the optimal speed limit. This speed is then displayed as a mandatory limit on the overhead signs. Automatic number plate recognition cameras supply travel time data by tracking specific vehicles along the route from their entry to their exit point.

By allowing speed across all lanes to be controlled in accordance with current traffic conditions, ATM enables traffic to flow more smoothly. This reduces constant stopping and starting, which helps to prevent the breakdown of traffic flow and consequently reduces congestion.

During normal traffic conditions, no speed limits are shown on signals and the shoulder is used for emergency and breakdown use only. If there is congestion or an incident, new speed limits are set to accommodate the increased congestion and are displayed on variable message signs posted over each lane. However, the shoulders remain for use in emergencies only, as designated by the red "X" displayed in the overhead sign. In the case of severe congestion or an incident in one of the normal running lanes, the hard shoulder may be opened (once the control center determines it is clear of debris and vehicles) and operated under controlled conditions; use of the emergency pull-off areas is also implemented. When necessary, the system also sets messages on the driver information signs to inform road users of the road conditions ahead of them; this helps to protect queuing traffic because drivers are made aware of slow-moving or stationary traffic ahead.



An emergency pull-off built in support of shoulder running (use of the shoulder as a traffic lane when warranted by traffic conditions) on the M42 freeway in England. (Photo: Courtesy of the Highways Agency, U.K.)

The outside hard shoulders, delineated by a raised rib line and red reflective studs, are open only between junctions and are used more as auxiliary lanes than as full travel lanes.

For further information, view the ATM project at www.highways.gov.uk/knowledge/tcc/atm/06.htm, or e-mail the Highways Agency at m42atmproject@highways.gsi.gov.uk.

Recent Consultant Contracts Awarded

As a service to our readers, we periodically include a listing of some recent consultant appointments by public agencies.

Agency	Project	No. of Proposals Received	Consultant	Amount of Contract	Main Reasons for Choosing Consultant
Vermont Agency of Transportation	Public Transit Policy Plan	6	TranSystems Corp.	$210,000	Understanding of project, approach, qualifications, organizational chart, personnel assigned.
City of Charlotte, NC	Center City Wayfinding System	10	Two Twelve Harakawa, Inc.	$99,000	Best qualified candidate.
Wisconsin DOT	Travel Demand Model - Planned Projects	N/A	HNTB and Cambridge Systematics as subcontractor	$200,000	Knowledge, experience, and familiarity with Wisconsin MPOs.
Minnesota DOT	ITS Integrated Corridor Strategic Plan	2	Short Elliott Hendrickson, Inc.	$173,000	More experienced team and the work plan/project understanding was more in-depth and went beyond what the RFP asked of them.
City of Scottsdale, AZ	On-Call Traffic Calming Design Services	13	A Dye Design and Morrison Maierle	$200,000	Relevant project experience, presentation and availability.
Utah DOT	Develop an Intelligent Transportation System Plan	7	Battelle Memorial Institute	$200,000	N/A
Port of Rochester, City of Rochester, NY	Transportation Evaluation and Support Study	3	Bergmann Associates	$40,000	Knowledge of area, creativity in solving transportation problems.